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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,076	02/05/2004	Michael Jeffery Doyle	DoYLE - rADoN	6028
7590	09/20/2004		EXAMINER	
Michael Doyle 1235 Bushkill St Easton, PA 18042			JEFFERY, JOHN A	
			ART UNIT	PAPER NUMBER
			3742	

DATE MAILED: 09/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/773,076	DOYLE, MICHAEL JEFFERY
	Examiner John A. Jeffery	Art Unit 3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-4 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 05 February 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____.
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____.	6) <input type="checkbox"/> Other: ____.

DETAILED ACTION

Abstract

The abstract of the disclosure is objected to because of the following informalities:

Applicant must carefully revise the abstract for proper grammatical form. For example, the first sentence must be rewritten to be a complete sentence, the second sentence is grammatically improper and must be rewritten for clarity, etc. Correction is required. See MPEP § 608.01(b).

Disclosure Objections

The disclosure is objected to because of the following informalities:

The specification is replete with grammatical and idiomatic errors too numerous to mention specifically. The specification should be revised carefully. Examples of such errors are:

(1) Page 4, first sentence is incomplete, (2) Page 7, last sentence, "there" must be changed to "their", (3) "watts" must be inserted after "75" in the last sentence of P. 7, (3) numerous words throughout the specification are improperly capitalized (e.g., "Mounting" line 6 of P. 4, etc.). Appropriate correction is required.

Claimed Subject Matter Not in Specification

The specification is objected to as failing to prove proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP 608.01(o). Correction of the following is required: Claims 2 and 3 call for “heater elements” (i.e., more than one heater element). However, the disclosure does not support this limitation since only one electric heating element 13 is disclosed.

If applicant intends to claim more than one electric heating element, then applicant must (1) provide additional description of such multiple heaters in the specification, and (2) identify each electric heater by a separate reference numeral. Applicant is cautioned against the inclusion of new matter.

Drawing Objections

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, for the reasons explained above in connection with claims 2 and 3, the multiple heater elements must be shown in the drawings or the feature(s) canceled from the claim(s). No new matter should be entered.

The drawings are also objected to because of the following informalities:

Figs. 1 and 2: Numeral 17 with a lead line having an arrowhead must be added to indicate the structure depicts a heater pipe 17 generally.

Fig. 2: Applicant must replace the single-line hatching with shading since the interior of heater pipe 17 is not shown in cross section. See Fig. 2 of U.S. Pat.

1,401,500 to Scott for a good example (compare shaded interior of cylinder T with cross hatched thickness). Also, numeral 12 must be shaded.

Fig. 2: Reference numeral 17 must be added to indicate the heater pipe.

Fig. 3: Applicant must add shading for clarity. See Fig. 1 and 2 of U.S. Pat. 1,389,252 to Lucas for good examples of shading.

Fig. 4: Proper cross-sectional hatching is required to properly denote (1) concrete material for numeral 19 (see numeral 24 of Crawshaw (US 4,988,237) for a good example), and (2) “loose sand or the like” hatching (i.e., stone) (see below) for gas permeable material 20 in accordance with MPEP 608.02. The layers are incorrectly hatched for metal. See the drawing below for proper hatching examples.

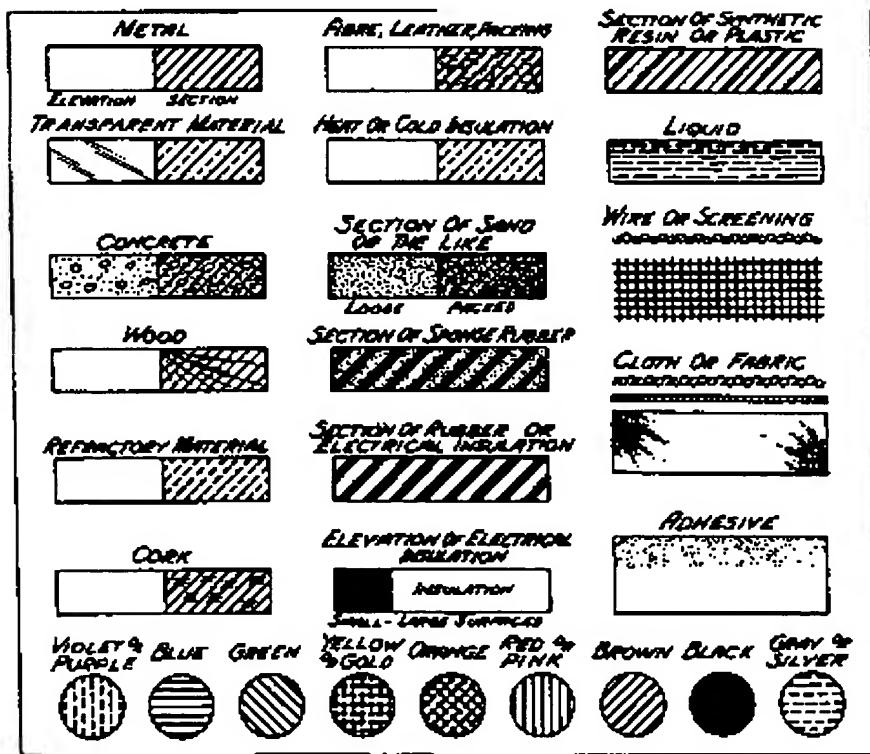


Fig. 4: Arrows indicating the direction of the flow of air must be added from air inlet pipe 23 through gas permeable layer 20 to heater pipe 17.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 U.S.C. § 103(a)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crawshaw (US 4,988,237) in view of Lucas (US 1,389,252). Crawshaw (US 4,988,237) discloses a radon removal system comprising convection duct 18 extending below slab 24 that exhausts radon-laden gases to the atmosphere via vent 42. See the figure and col. 1, lines 37-60. Moreover, heat from pump motor 38 is conducted to the radon-containing gas. Col. 4, lines 56-63.

The claims differ from the previously cited prior art in calling for a heat source within the duct to engender a convection air current through the duct. But mounting electric heating elements within ducts to create a ventilating airflow, however, is well known in the art. Lucas (US 1,389,252), for example, discloses an electric heating element 18 in exhaust duct 27 to create a forced ventilation airflow. See Figs. 1 and 2 and P. 1, lines 17-23. According to P. 1, lines 87-92, the electric heating element provides a forced ventilation of the duct without the necessity of using mechanical means.

In view of Lucas (US 1,389,252), it would have been obvious to one of ordinary skill in the art to utilize an electric heating element in lieu of the pump of Crawshaw (US 4,988,237) to cause a forced ventilation of the duct without the necessity of using

mechanical means, thus reducing the number of apparatus parts and lowering installation costs.

Other Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant should (1) separately consider the art, and (2) consider the art together with the previously cited prior art for potential applicability under 35 U.S.C. §§ 102 or 103 when responding to this action.

US 984, US 808, US 182, US 501 disclose radon removal systems relevant to the instant invention. US 830, US 500, US 495 disclose electric heaters mounted on or in flues to create a convection airflow therethrough. US 262, US 666 disclose band heaters for air pipes. US 739 discloses a convection heater relevant to the instant invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John A. Jeffery whose telephone number is (703) 306-4601. The examiner can normally be reached on Monday - Thursday from 7:00 AM to 4:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans, can be reached on (703) 305-5766. All faxes should be sent to the centralized fax number at (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)



**JOHN A. JEFFERY
PRIMARY EXAMINER**

9/17/04